Attachment B

Variance Attachment B
Variance No. 2004V-0292
ARCI

This attachment provides the list of information to be provided to the Federal Aviation Administration (FAA) and the Department of Defense (DOD) in notifications of outdoor laser light shows (demonstrations) which cause projections into the sky. This information is required to permit FAA and DOD jointly to do the aeronautical study necessary to determine whether or not the proposed effects are objectionable.

CONTENT OF NOTIFICATIONS

a. Proponent notifications to the FAA regional office will include the following information on all proposed outdoor demonstrations:

1. Laser group/company (point of contact).
2. Business addresses.
3. Telephone number.
4. CDRH Variance number and expiration date.
5. Date(s) and time(s) of setup and alignment.
6. Date(s) and time(s) of shows(s).
   (a) Show length
   (b) Running time.
7. Location of the show.
   (a) Show place name and address.
   (b) Latitude and longitude of show place in Degrees, Minutes and Seconds.
   (c) Maps (USGS 7.5 Quadrangle or acceptable alternate).
8. Class/Type of Laser (CW or Pulsed*)
9. Maximum emitted power (watts)/repetition frequency (kHz) at the projector as certified to CDRH.
10. Azimuth direction of beams.
11. Elevation of beams in degrees above the horizon.
    (a) maximum
    (b) minimum
12. Beam divergence (milliradians).
13. Maximum distance from source for irradiance of 2.6 mW/cm^2, 100 $\mu W/cm^2$, and 5 $\mu W/cm^2$ based on maximum emitted power.
14. Maximum altitude above source for irradiance of 2.6 mW/cm^2, 100 $\mu W/cm^2$, and 5 $\mu W/cm^2$ based on maximum emitted power.
15. A diagram depicting all beam arrays terminated/unterminated.
16. Laser safety officer/operator:
    (a) Local address and phone number, to include an operational telephone number at the site.
    (b) Additional safety procedures:
        (1) Communications procedures during the show.
        (2) Visual aircraft spotters.
        (3) Other.

17. Quality Assurance Program, describing physical/procedural control of:
    (a) laser power
    (b) beam divergence
    (c) azimuth and elevation of beam paths
    (d) beam termination surfaces
    (e) emergency shutdown procedures

Note: Repetitive pulsed laser data (e.g., equipment type, pulse duration, etc.) shall be validated by the CDRH, and shall accompany submission to the FAA.

b. Supplementary information if applicable. Include the CDRH letter validating the measures which result in a smaller affected area than that shown in the Laser System Power Range Table (Table 28-2-1, FAA Order 7400.2E, Chg. 2).

SUBMISSION OF PROPOSAL

a. The last condition of Attachment A of the variance requires that you provide written notification to the Federal Aviation Administration (FAA) and the Department of Defense (DOD) and satisfy any requirements they may specify before conducting an outdoor laser light show.

b. In detail, this requirement means that:

1. All notifications are to be directed to the Air Traffic Division at the FAA regional office having jurisdiction over the area where the laser show will take place.

2. FAA needs at least 30 days advance notice to process a request and conduct an aeronautical study. The FAA recognizes that industry conditions may not always permit the advance notice desired. While FAA endeavors to accommodate all requests, proper conduct of the aeronautical study to determine airspace effects is essential to air safety. This is particularly true when the nature of the demonstration is in close proximity to an airport or would necessitate protection of large amounts of airspace. In these cases, it may be impossible for the FAA to respond to short-notice requests.

3. Notifications are required for all demonstrations in which laser light beams may be directed or reflected into airspace (including set-up, alignment, and rehearsals). Notifications should contain sufficient technical information to allow proper evaluation. The primary concern is the range and elevation from the source of the airspace which may be affected by the display.

4. A proponent wishing to provide supplementary information about measures which will result in a smaller actual danger area than that shown in the Laser System Power Range Table (Table 28-2-1, FAA Order 7400.2E, Chg. 2) should submit the data in advance to CDRH for review. CDRH will validate the information and issue a letter to the proponent to include with their notification to the FAA.